60,469-241
PA-000.05178-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS:	Oh
SERIAL NO.:	10/561,559
FILED:	12/19/2005
GROUP ART:	3654
EXAMINER:	Kruer, Stefan
FOR:	Elevator Active Suspension Utilizing Repulsive Magnetic Force

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Appellant now submits its brief in this appeal. A credit card payment form is attached. The Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds for any additional fees or credit the account for any overpayment.

Real Party in Interest

Otis Elevator Company, which is the assignee of this application, is the real party in interest. Otis Elevator Company is a business unit of United Technologies Corporation.

Related Appeals and Interferences

There are no related appeals or interferences.

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Status of the Claims

Claims 1-11 are pending.

Claims 4, 5, 9 and 10 have been indicated as being allowable and are not on appeal.

Claims 1-3, 6-8 and 11 stand rejected under 35 U.S.C. §103 and are on appeal

Status of Amendments

There are no unentered amendments.

Summary of Claimed Subject Matter

There are two independent claims, claims 1 and 8. Those claims are reproduced below with references to the drawings and specification contained in brackets.

1. An elevator system comprising:

a car (Figure 1, 28) having a plurality of opposed electromagnets (Figure 1, 26) {page 3, lines 27-29}; and

two spaced car follower portions (Figure 1, 40) each having an electromagnet (Figure 1, 24) facing a corresponding one of said electromagnets on said car, and said car follower portions each being provided with guide structure (Figure 2, 42) for moving along a guide rail (Figure 1, 25) in an elevator hoistway, said electromagnets on said car and said car follower portions interacting to provide a repulsive force tending to force said elevator car to be centered between said car follower portions {page 3, line 27 – page 4, line 2}.

8. An elevator comprising:

a car (Figure 1, 28) to be movable through a vertical path of travel {page 3, lines 29-30}; and

a car follower (Figure 1, 22) to be movable along two guide rails (Figure 1, 25), said car follower including magnets (Figure 1, 24) associated with each guide rail, said magnets on said car follower interconnected (Figure 1, 32) to move together in a horizontal plane and relative to said car, and said car including magnets (Figure 1, 26) positioned to be opposed to said magnets on said car follower, said car being free to move relative to said car follower in a horizontal plane, but generally constrained to move with said car follower along said vertical path of travel, and there being a repulsive magnetic force between said magnets on said car follower and said magnets on said car {page 3, line 27 – page 4, line 2 and page 4, line 26-28}.

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Grounds of Rejection to be Reviewed on Appeal

Claims 1-3, 6-8 and 11 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,305,502 (the "*He, et al.*" reference) in view of the Japanese Reference JP-07215634 (the "*Kurosawa, et al.*" reference).

ARGUMENT

There is no *prima facie* case of obviousness. Neither reference teaches a repulsive force as suggested by the Examiner. Additionally, even if the secondary reference did teach a repulsive force, that cannot be inserted into the primary reference because that would change the principle of operation of the primary reference and cause it to work in the opposite manner in which it is intended to work. Such a modification (assuming that the Examiner's suggested teachings could even be found in the references) cannot be made when attempting to manufacture a *prima facie* case of obviousness. The rejection must be withdrawn.

The rejection of claims 1-3, 6-8 and 11 under 35 U.S.C. §103 must be withdrawn.

The Examiner properly acknowledges that the *He, et al.* reference includes using an attractive force between electromagnets 216 and reaction plates 210. The Examiner then proposes to modify the *He, et al.* reference by using an allegedly repulsive force from the *Kurosawa, et al.* reference. The Examiner contends that such a modification would provide "an alternative, more responsive means to the system of *He, et al.* for reducing vibrations."

Appellant respectfully disagrees with the Examiner's interpretation of the *Kurosawa, et al.* reference. The Examiner incorrectly suggests that the *Kurosawa, et al.* reference teaches using a repulsive force. Paragraph 0013 of the *Kurosawa, et al.* reference states that the longitudinal direction electromagnet 10 ***attracts*** the sole plate 6 of a car frame

2. It is clear, therefore, that an attractive force is used in the *Kurosawa, et al.* reference. There is no teaching in that reference of a repulsive force as suggested by the Examiner. Therefore, even if the proposed combination could be made, there is no repulsive force as suggested by the Examiner and no possible *prima facie* case of obviousness. Neither reference teaches using a repulsive force. The rejection must be reversed.

Further, even if the *He, et al.* or *Kurosawa, et al.* references could be distorted to contend that there is a repulsive force used in them, neither reference teaches opposing electromagnets interacting with each other. Instead, in the *He, et al.* reference, the electromagnets 216 interact with magnetic reaction plates 210. There is no interaction between electromagnets consistent with that recited in Appellant's claims. Additionally, the *Kurosawa, et al.* reference does not have electromagnets interacting with each other. Electromagnets 10 in that reference attractively pull on the plate 6, for example. That is not the same thing as having electromagnets interacting with each other.

Without any teaching of an electromagnet facing a corresponding electromagnet and interacting as recited in Appellant's claims, there is no possible *prima facie* case of obviousness.

Moreover, even if it were possible to find a repulsive force in the *Kurosawa, et al.* reference, the proposed modification to the *He, et al.* reference cannot be made because it changes the principle of operation of that reference and renders it incapable of achieving its intended result. The *He, et al.* reference relies upon an attractive magnetic force to accomplish its intended result. The Examiner proposes to modify that to do the opposite. Such a modification cannot be made because it changes the principle of operation of the *He, et al.* reference. Using a repulsive force instead of an attractive force completely changes

the principle of the operation in the *He, et al.* reference. Further, the intended result of utilizing an attractive force to achieve what is described in the *He, et al.* reference becomes impossible if one eliminates that attractive force and, instead, uses a repulsive force of some sort.

The proposed modification to the *He, et al.* reference, even if it were possible to find the teachings that the Examiner attributes to the references, cannot be made. There is simply no *prima facie* case of obviousness.

CONCLUSION

Without any teaching of a repulsive force, without any teaching of an interaction between electromagnets and without the ability to make the proposed modification, it is impossible to find a *prima facie* case of obviousness against Appellant's claims. The rejection under 35 U.S.C. §103 must be reversed.

Respectfully submitted,

CARLSON, GASKEY & OLDS, P.C.

January 16, 2009
Date

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CERTIFICATE OF FACSIMILE

I hereby certify that this Appeal Brief, relative to Application Serial No. 10/561,559, is being facsimile transmitted to the Patent and Trademark Office (Fax No. (571) 273-8300) on January 16, 2009.

Theresa M. Palmateer

APPENDIX OF CLAIMS

1. An elevator system comprising:

a car (28) having a plurality of opposed electromagnets (26); and

two spaced car follower portions (40) each having an electromagnet (24) facing a corresponding one of said electromagnets on said car, and said car follower portions each being provided with guide structure (42) for moving along a guide rail (25) in an elevator hoistway, said electromagnets on said car and said car follower portions interacting to provide a repulsive force tending to force said elevator car to be centered between said car follower portions.

2. An elevator system as set forth in Claim 1, wherein said car follower portions are interconnected (32) to move together as a single car follower.

3. An elevator system as set forth in Claim 2, wherein said car is free to move relative to said car follower in a horizontal plane but constrained to move with said car follower in a vertical direction.

6. An elevator system as set forth in Claim 1, wherein there are a plurality of electromagnets associated with each of said car follower portions.

7. An elevator system as set forth in Claim 1, wherein a control system (30) controls the field strength of said electromagnets to in turn control a repulsive force from said electromagnets.

8. An elevato
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follower including magne
follower interconnected (3
car, and said car includin
said car follower, said c
horizontal plane, but gen
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magnets on said car follo

comprising:
be movable through a vertical path of travel; and
ver (22) to be movable along two guide rails (25), said car
ls (24) associated with each guide rail, said magnets on said car
2) to move together in a horizontal plane and relative to said
magnets (26) positioned to be opposed to said magnets on
ar being free to move relative to said car follower in a
erally constrained to move with said car follower along said
d there being a repulsive magnetic force between said
wer and said magnets on said car.

11. An elevato
electromagnets and includi
force between at least two
relative to the car follower.

as set forth in Claim 8, wherein said magnets are
g a control (30) that selectively varies the repulsive magnetic
opposing magnets to selectively control a position of the car

EVIDENCE APPENDIX

None.

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RELATED PROCEEDINGS APPENDIX

None.